

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1, 2, and 13-16 from further consideration herein.

Please amend claims 4, 5, and 8-12 as follows.

LISTING OF THE CLAIMS

The listing of claims will replace all prior versions, and listings of claims in the application:

1. (Canceled)

2. (Canceled)

3. (Currently Amended) The invention of claim ~~24~~ wherein a radial depth of the plurality of primary and secondary blades is substantially greater at the first portion of the hub than at the second portion of the hub.

4. (Currently Amended) ~~The invention of claim 2~~ A high performance inducer for pumping cryogenic two phase fluids from reservoirs comprising:

_____ a hub including a first portion having a first diameter and a second portion having a second diameter larger than the first diameter,

wherein the hub increases in diameter from the first portion to the second portion;

_____ a plurality of primary blades having a generally helical conformation circumferentially disposed about the hub, each primary blade having a first length; and

_____ a plurality of secondary blades circumferentially disposed about the hub, each secondary blade being interposed between two primary blades and having a second length different than the first length,

wherein an outer diameter of each primary blade and each secondary blade is generally constant from a leading edge to a trailing edge of said primary and secondary blades.

5. (Currently Amended) The invention of claim ~~14~~ wherein the first portion includes a generally rounded end and a sidewall extending both radially outward and axially from the rounded end.

6. (Original) The invention of claim 5 wherein the sidewall has a general curvilinear conformation.

7. (Canceled)

8. (Currently Amended) The invention of claim 74 wherein the primary blades extend circumferentially about the hub generally 180 degrees from a leading edge to a trailing edge thereof.

9. (Currently Amended) The invention of claim 74 wherein a leading edge of each primary blade is circumferentially spaced generally 120 degrees from a leading edge of an adjacent primary blade.

10. (Currently Amended) The invention of claim 74 wherein a leading edge of each secondary blade is circumferentially spaced generally 60 degrees from a leading edge of an adjacent primary blade.

11. (Currently Amended) The invention of claim 10 wherein a circumferential extent from at the leading edge of each secondary blade to a trailing edge thereof is generally 150 degrees.

12. (Currently Amended) The invention of claim 44 wherein the primary blades and the secondary blades have a thickness that tapers from a leading edge of said primary and said secondary blade to a substantially constant thickness over the remaining circumferential extent of said primary and said secondary blades.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Previously Presented) In a submersible pump of the type used to pump a two phase liquid from a cryogenic storage system, an inducer impeller for pumping a two phase fluid comprising:

a hub including a first portion having a first diameter and a second portion having a second diameter, wherein the hub increases in diameter from the first portion to the second portion;

a plurality of axially extending identically shaped primary blades having a general helical conformation circumferentially disposed about the hub and a leading edge extending radially and axially from the hub;

a plurality of axially extending secondary blades circumferentially disposed about the hub such that one of the secondary blades is interposed between two adjacent primary blades, the secondary blades being shorter in length than the primary blades; and

wherein an outer diameter of each primary blade and each secondary blade is generally constant from a leading edge to a trailing edge of said primary and said secondary blade.

18. (Previously Presented) The invention of claim 17 wherein the depth of the plurality of primary and secondary blades is substantially greater at the first portion of the hub than at the second portion of the hub.

19. (Previously Presented) The invention of claim 17 wherein the vapor-to-liquid ratio (V/L) of the pumped fluid is up to about a 1:1 ratio.